

**Ethnic and other parental differences in the life course patterns of young adult women born in Germany**Cristina Samper (Hertie School of Governance, Berlin)<sup>1</sup>**Abstract**

This paper examines the employment and family formation biographies of young women born in Germany between 1950 and 1987. Using data from the German Socio-Economic Panel (GSOEP) we follow them from age 15 until age 30. Making use of sequence analysis tools, by clustering, we identify four ‘typical’ employment trajectories followed by women in their young adulthood. Half of the women show a smooth transition between ages 20 and 25 from education to sustained full time employment. The other half follow more complex paths with long education, later part-time or non-employment. They also show earlier transitions into family formation. An analysis on cluster affiliation shows that differences in paths exist between women of different parental origin. In particular, women with migration background are more likely to follow biographies of part time, long education, or non-employment after compulsory schooling. Second-generation Turkish women show a high probability (30%) of following a non-employment path. Some of these differences can be explained by group level socio-economic factors, but they are to a great extent related to group differences in family formation behavior.

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## **1 Introduction**

The life courses of the children of migrants, commonly typified as “second generation migrants”, have been widely studied in European societies from sociological and demographic perspectives (eg. Pailhé 2017; Sürig and Wilmes 2016; Kleineper and de Valk 2016; Milewski 2013; Luthra 2013 and 2010; Heath et al. 2008; Alba 2005). In many cases they fare better than the first generations in integration indicators of housing and employment (Zorlu and van Gaalen 2016; Milewski 2013, Fertig and Schmidt 2001). At the same time, they lag behind in educational outcomes when compared to the native population (Luthra 2010; Kristen and Granato 2007; Worbs 2003). Second generation migrants also tend to be segregated into particular segments of the labor market (Hillmert and Weßling 2014; Luthra 2013; Schurer 2008; Burkert and Seibert 2007; Konietzka and Seibert 2003). These differences have been largely attributed to lower human capital endowment and socio economic origin (Klink and Wagner 1999; Luthra 2013). The family formation behavior of second generations has also been a prominent subject of study. Most studies report that second generation migrants have fewer children than first generation migrants and that their behavior is more similar to that of the native population (Milewski 2010a). Other studies report that patterns in marriage and family formation timing persist through generations (Pailhé 2017; Krapf and Wolf 2015; Scott and Stanfors 2011; Milewski 2010b).

These multiple dimensions of the life course (transitions in education and employment, family formation, leaving parental home etc.) have also been many times studied in conjunction, as an analysis on the “full” transition to adulthood. Ethnic differences in life course pattern have been repeatedly found, particularly in respect to the ethnic background of their parents (Ferrari and Pailhé 2017; Kleineper and de Valk 2016;

Zorlu and Mulder 2011; Huschek et al 2010). The transition to adulthood is a critical life stage; many life aspects are defined for the long run. In the case of women, who have been known to carry the highest burden in childcare and family building, events in one sphere of the life course, like having a child at a particular timing, will interfere with events, like continuing a training, in the employment sphere (Brewster and Rindfuss 2000). The institutional setting also plays a role in the timing of transitions. In Germany, since the post war period, life courses of women have been diversifying (Brückner and Mayer 2005; Hullen 2001). Women contributed largely to the educational expansion, and these extensions in education are most often coupled with postponement in family formation transitions (Blossfeld 1991). For children of migrants, depending on the period and the political climate at which they were born or when they transitioned to adulthood, the constraints for education and integration could have been very different (Luthra 2013; Worbs 2003). Socio economic conditions and cultural resources in the household of their parents also play a role in the life choices they make (Steinbach and Nauck 2004). Different cultural backgrounds of the parents can mean different values at home than the ones in their country of birth and therefore translate into different career and especially family formation choices (Diehl and Koenig 2016; Luthra 2013; Scott and Stanfors 2011). Little is known however, about the life course patterns of young women in Germany and how they differ by migration background. Although some studies have already investigated differences in the transitions to adulthood in Germany (Fulda et al. 2019; Seiffge-Krenke 2016; Hullen 2001), they do not consider nor focus on populations with migration background in their analysis. Many life course studies that differentiate by migration background do exist for other European countries (e.g. Paille 2017; Kleineper, and de Valk 2016; Kleineper et al. 2015; Zorlu and Mulder 2011).

Using sequence analysis, in this paper we identify and compare the patterns of employment and family formation of young adult women who were born in Germany between 1950 and 1987. We are especially interested in understanding to what extent women with different parental backgrounds follow different life paths. We compare migration backgrounds, by considering different parental origin groups (native German; mixed: half German; both foreign parents: Turkey; both foreign parents: other). We contribute to the literature in the several ways. Firstly, we identify typologies and visualize the most common employment and family formation histories of young adult women in Germany, including those of the second generation. Second, we investigate how women's trajectories vary by parental origin. Third, we investigate how and to what extent these differences by parental origin are also related to other factors of culture, socio-economic difference or the behavior of the parents in their adolescence.

Using optimal matching we identify 4 typical employment trajectory clusters, then we analyze cluster affiliation and measure to what extent different groups of parental origin follow different life paths than other women. To end, we further investigate how parental origin differences might be related to different socio economic factors, behaviors in the household and parallel family formation patterns. The advantage of sequence analysis is that we can consider dynamic patterns in different life spheres and see how they relate to each other. We have two main research questions 1) Are there differences in employment and family trajectories between women of different parental origin? 2) How are these differences related to parental transmission of socio economic status, employment behavior and family formation behavior? For the analysis we use the German Socio Economic Panel

v34. In the next sections we proceed to explain the context, present the theoretical consideration, the methodology and then we display and discuss the results.

## **2 Context: Migration to Germany, Integration and Transitions to Adulthood**

### *Flows and Integration Measures*

In 2017 from the 81.7 million in the German population, the population with migration background was 23.6%. And from those with migration background, around one third were born in Germany (Statistisches Bundesamt 2019a). A large proportion of the second-generation migrants who have a foreign nationality and were born in Germany come from Turkey (29%) and Southern European countries like Italy (11%) (Statistisches Bundesamt 2019b). Our study focuses on the group of children of migrants who were born in Germany; with the term ‘second generation’ we refer to people who were born in Germany and had one or more foreign-born parents.

In the post war period, as the economy boomed and there was a need for manual labor, the Federal Republic of Germany, as other European countries, received inflows of up to 2.6 million “guest workers” until 1973. Other flows to Germany at the time, included displaced persons from former German territories, asylum seekers, refugees, ethnic Germans (Aussiedler) and also Jewish migrants from the Soviet Union (Worbs, S. 2003, Heckmann 2016). One of the major groups to remain from those times in Germany today is of Turkish origin. From 1961 to 1973 German companies recruited 740,000 labor migrants from Turkey, mostly for unskilled labor (Worbs 2003). The majority came from the

countryside, they were lowly educated and were expected to stay for a limited time.<sup>2</sup> Then in 1973 with the oil crisis there was a ban on further recruitment and although the labor migration stopped, the number of foreign nationals including a large proportion of Turkish citizens increased with family reunification (González-Ferrer, A. 2007; Worbs 2003; Sommer 1999). After the Fall of the Wall, the share of Aussiedler increased in the beginning of the 1990s. All in all, it was calculated that during the period between 1952 to 1986, about 22.5 million immigrants from abroad were registered, and around 14.8 million people left the country during that same period; meaning there is a large long established foreign population in Germany (Statistisches Bundesamt 2010).

Integration was not an immediate policy concern. Despite the large inflow of “guest workers” and other migrants, Germany did not consider itself to be an immigration country for a long time, until the late 1990’s (Liebig 2007). Since guest workers were considered temporary migrants, it was only after the recruitment stopped and many migrant workers with their families settled in Germany, that in 1978 a commissioner for foreigners saw integration was a necessity. The strategy was to include migrants in the institutions for welfare and social policy (Heckmann and Schnapper 2016). This well-intentioned strategy to include migrants in the social security and schooling system has been known have clear established inequalities. In the case of migrant parents it was harder to transmit to their children the necessary German culture capital required to thrive in the institutions (Heckman and Schnapper 2016; Steinbach and Nauck 2004). Although with large variance, as a whole second generation children are behind when compared to native children. They fair worse in terms of grades and are also often filtered into less skilled employment careers

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<sup>2</sup> There was a ‘rotation’ system in place that supposed they would return to their country of origin (Castles 1986)

(Alba et al. 2017, Kristen and Granato 2007, Diehl et al. 2009). They are also more likely to be in welfare dependence due to lower average education (Fertig and Schmidt 2001).

The limited naturalization laws has also meant a great proportion of children of migrants born in Germany were not citizens by birth, posing possible problems for integration. In the 1990s the majority of the second-generation of Turkish origin were not German citizens (Diehl and Blohm 2003, Alba 2005) they therefor did not identify themselves as German. In 2000 naturalization laws changed to more broadly provide citizenship to second generations who were educated in Germany and whose parents held permanent residencies or lived in Germany for at least 8 years. Before, the second generation was legally foreign born and the process of naturalization included a significant fee, proof of competence of the German language, clean police record, and most pressing the requirement to surrender of previous citizenship.<sup>3</sup>

#### *Diversification in the transitions to adulthood in Europe*

With the second demographic transition, period fertility fell and births were postponed (Fulda et al. 2019; Lesthaeghe 2014; Lesthaeghe, R. 2010). Non-marital unions and childbirth outside of marriage have increased, and changes in the family sphere link also with changes in the employment and family domain of the life course. Life courses have been seen to be ‘de-standardizing’ as young adults have passed from following the ‘standard biography’ with clear steps of career formation followed by family formation to the so-called ‘choice biography’ (Bruckner and Mayer 2005). The individualization or de-standardization hypothesis states that given the increasing number of opportunities

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<sup>3</sup> This was a problem for many Turkish citizens due to inheritance law (Diehl and Blohm 2003), it also still holds in the case of Turkish origin second generations, as they are required to choose a unique citizenship at age 23.

available to young people, the paths they follow to adulthood are diversifying. Empirical studies around Europe have also shown that the diversification and postponement of transitions to adulthood is a general trend (Widmer and Ritschard 2009; Aassve et al. 2007; Billari 2001). With the increase in white-collar jobs and careers, transitions from schooling to the labor market have been occurring later (Brewster and Rindfuss 2000). For women in particular, who are still the primarily responsible for childrearing, the institutional context, is known to play a role in the level of conflict between the career building and family formation spheres.

In Germany with the expansion of education, especially women extended their years of participation in schooling and this has delayed their transition to parenthood and adulthood (Blossfeld and Huinick 1991). Since the norm was to have a completed education career as a requirement for marriage and family formation, the timing of marriage has been delayed and so is parenthood (Hullen 2001; Blossfeld and Huinick 1991). Western German women were known to face large conflicts between the labor market and motherhood. Amongst European countries, Germany used to have the biggest gap in working hours between childless women and mothers (Uunk et al. 2005). This was largely related to the institutions in Germany, the skewed gender roles and the expectations of motherhood. In Western Germany the housewife mother role model existed until 1977, woman could be fully dependent on her husband. Then in 1979, policies such as maternity leave, education leave and tax-free allowances were granted to mothers, reinforcing their role to stay at home. Major policy reforms were enacted since 2005 (eg. shortening of parental leave) and this is reflected in an increase in women's employment participation, especially in part time (Brenke 2014).



### **3 Theoretical considerations, previous findings and hypotheses**

*Socialization: parental transmission of norms, social position and behavior*

Socialization is the process through which people learn how to fit into the society they are born into and by which they define the values and paths they wish to follow. It is related to the place where a person is born, with the institutions and the culture they are in contact with at school and other public spaces (horizontal socialization), and especially it is related to the customs they grow up with in their families (vertical socialization). Despite many children of migrants being born in similar circumstances, attending the same schools and partaking in the same activities as ‘native’ children, differences in transition timing and general life course trajectories have been found between groups of different origins in many European societies (Ferrari and Pailhé 2017; Kleinepier, T., and de Valk 2016, Zorlu and Mulder 2011). Socialization in the early development years permeates through adulthood, therefore first generation migrants who arrive as adults and have children in the host country, might have different values and expectations than people with similar demographic characteristics in the host country. For this reason they also raise their children to have different values than the host population. This might be particularly noticeable in cases where there is a large cultural distance between the origin and the host country (Pailhé 2017; Höhne and Koopmans 2010).

Different cultural socialization in families with migrant background can be passed on through generations. Studies have found, for example, that second generation women who have ethnic roots from patriarchal societies, where marriage and childbirth tend to occur early in the life course, also tend to show earlier transitions into parenthood than the native population (Krapf and Wolf 2015, Scott and Stanfors 2011). Parental values and

given opinions that might conflict with those in the settlement country are known to influence children in their decisions towards autonomy and adulthood (Lou et al. 2012). Furthermore, depending on the reception and integration conditions, families with migration background, especially those with two migrant parents, might lack certain cultural knowledge to help their children succeed in the host country institutions (Luthra 2013; Steinbach and Nauck 2004). At the same time, migrant parents are also known to be highly ambitious, so they could also encourage their children to take longer career paths and pursue ambitious occupational paths. In Germany, for example, some Turkish parents are known to indicate higher ambitions than native parents (Salikutluk 2016). Due to these multiple situations in which the socialization of children of migrants might differ to those of native children, we expect children of migrants to be more likely represented than ‘native’ children in employment pathways alternative to mainstream path (*hypothesis 1a*). For those cases when parental origin is mixed, – one parent is foreign and the other is native – since having a native parent might comparatively facilitate the socialization into the host origin culture (Ramakrishnan 2004), we expect smaller differences, in careers, with the ‘native’ population (*hypothesis 1b*).

Differences in the life paths followed by women of different parental origin are, however, not purely a cultural phenomenon. As we described above, of the migrants who arrived and settled in Germany for the observed period, most were not selected for labor market positions beyond manual labor. In the case of Turkish migrant workers, for example, it is known that most recruited workers were lowly educated (Worbs 2003). Germany is a country known for having low social mobility (OECD 2018). Therefore, some differences found between the native populations and children of migrants have in many cases been explained with the socio economic position of the parents (Hartmann

2016; Luthra 2010; Worbs 2003, Fertig and Schmid 2001). If migrant families have lower economic and cultural capital resources to invest in their children, this leads to negative placement opportunities in school and vocational training (Steinbach and Nauck 2004). Since we can expect the professional qualifications of the parents, as a proxy to socio economic origin, to have an influence in the professional life paths chosen by their daughters, and some groups of migrants were selected on low qualifications, we can expect the professional qualifications of the father will explain some of the differences in the life course paths followed by women of different parental origin (*hypothesis 2a*). Furthermore, socio-economic disadvantages are known to increase the likelihood for children to follow lower educational tracks, which also lowers their chances to following standard vocational or high qualification career paths (Hillmert and Weßling 2014, Diehl et al. 2009). Consequently, we assume women who follow different compulsory school paths<sup>4</sup> will lead different employment career, and because some children of migrants are more highly represented in the lower educational tracks this covariate will further explain some of the differences in paths taken by groups of different parental origin (*hypothesis 2b*).

The culture in the parental household, which is highly likely related to the socialization of the parents in their country of origin, will also play a significant role in the life paths that women follow; independent from socio economic status and educational achievement. Parental culture is transmitted in the form of values, views and behaviors that are taught to be prevalent and acceptable. Children are usually impregnated by their parents' ways, as they are the ones who raise them. In this way, values and behaviors in

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<sup>4</sup> Although there are variations in the school systems by region the most common options are Hauptschule, Realschule and Gymnasium. Only Gymnasium leads automatically to an Abitur or Fachhochschulreife degree, which are required to access tertiary education (Luthra 2010).

family formation and employment tend to be transmitted through generations (Milewski 2013; Krapf and Wolf 2015). Religiosity, for example, has been shown to persist across generations of Turkish migrants (Diehl and König 2016). When it comes to employment, comparing groups of migrants, previous studies have found, that maternal employment increases the likelihood of employment for their daughters (Milewski 2013), especially in cases of cultures where women are likely to stay at home taking care of the children (Blau et al. 2013). From the groups we consider, Turkish culture for instance is known to follow more traditional breadwinner role patterns (Höhne and Koopmans 2010). With this in mind, we also expect the employment participation of the women's mother in her teenage years to be a determinant of whether the observed women also have a strong labor market attachment. Since women from some groups of origin will be more exposed to their mother working than others we also expect this covariate to explain some of the differences between groups of parental origin (*hypothesis 3a*). More strongly than the employment culture in the household, the family formation behavior is also known to commonly pass through generations. For example, for women of Turkish origin in different European countries, it has been found that their fertility patterns are unlikely to converge to native ones. This has been explained as the Turkish culture having a very strong influence in decisions of family formation and the position women in the household (Pailhé 2017; Scott and Stanfors 2011; Milewski 2010, Huschek et al. 2010). Hence we can expect there will be differences in family formation behavior by groups of different parental origins, and since transitions in the family realm for women usually imply temporal or permanent interruptions to their employment careers, this will further explain differences in employment careers by parental origins groups (*hypothesis 3b*).

In the following investigation we are going to find the most common employment and family formation patterns followed by women born in Germany, and see to what extent women of different parental origins follow different life course paths.

## **4 Data and Methods**

### *Data*

We use data from the German Socio Economic Panel v34. It is a yearly panel survey that covers the German population and includes many migrants and their descendants. The data contains retrospective education, employment, birth and marital histories. Since it is survey data we also have detailed information on the interviewees parents: their origin, their education and their employment behavior when the respondent was 15 years old. Similar life course studies have been made with register data (Kil et al. 2018, Pailhé 2017; Kleineper 2016). Since we have survey data, we perhaps cannot count with the reliability and detail of register data, nonetheless survey data has other advantages such as more detailed information on the parental characteristics.

We observe women from age 15 to age 30 and consider employment and family histories separately. For our sample we select all women with ‘migration background’ who were born in western Germany<sup>5</sup> between 1950 and 1987 and who were at least 30 years old at the time of their interview. After keeping all ‘migrant background’ women with complete employment and birth histories we were left with 869 women. In addition we take a random

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<sup>5</sup> We focus on western Germany. There were a few numbers in our sample who were children of migrants born in eastern Germany, and knowing the large institutional differences between the two Germanys (eg, Struffolino et al. 2016, Hullen 2001), it was preferable to focus on one institutional setting.

sample of native German women for comparison of also  $n=869^6$ . In total we analyze a sample of 1,738 women.

With the retrospective employment and family histories we can trace women's trajectories back until when they were age 15. In their employment trajectories we distinguish between five possible yearly states: (1) full time employment, (2) part time employment, (3) parental leave, (4) non-employment, and (5) education. In their family trajectories we distinguish between 4 possible relevant marital – child states: (1) single – childless, (2) single – mother, (3) married–childless, (4) married–mother. We additionally identify 2 states for cases when the histories were incomplete or in few cases of early marital dissolution (5) other-childless, (6) other-mother. Given the few cases available for proper analysis, we will not discuss them in the analysis. In cases when more than one state was mentioned in one year, in the employment trajectories we prioritized employment spells over non-employment, and in the family trajectories we prioritized marriage and childbirth over single and childless.

### *Methods*

Sequence analysis is a wide spread tool used in the social sciences to analyze and conceptualize the life course paths of different populations (Barban and Sironi 2019; Kleinepier et al. 2015, Cornwell 2015). We proceed as follows. In a first step we use TraMiner an R package designed to analyze and visualize discrete sequence data (Gabadinho et al. 2011). Using optimal matching (OM) we generate a dissimilarity distance measure between different states sequences (Studer and Ritschard 2016). In this

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<sup>6</sup> To select the random sample of native German women, we sampled them in three different cohorts (1950-1972, 1972-1979, 1980-1987), matching the subsample cohort sizes in the group of women with migration background.

way we can compare individual life paths, and group people with similar patterns. To obtain ‘ideal’ sequence types in each sphere, we use a Wald clustering algorithm based on the measured OM distances. As different partitions of the data are considered, for each possible number of clusters the average silhouette width (ASW)<sup>7</sup> is calculated, we then choose the option with the fewest number of clusters and the highest ASW. Once the optimal number of clusters is selected, we can visualize them and the ‘typical’ patterns are revealed; each person is identified as following one of the cluster types. We do this separately for the employment and the family formation sequences. The first will be our dependent variable in the multinomial regression analysis and the second will be considered as an independent variable. In a next step we take the employment clusters as the dependent variables in a multinomial logistic regression. We use a stepwise modeling strategy to investigate cluster affiliation by parental origin. We are interested in finding out how being from different ethnic backgrounds relates to ending up in different clusters. Furthermore we can investigate how coming from different ethnic backgrounds is also related to other socio economic and behavioral characteristics.

Our main independent variable of interest for the multinomial logistic regression is the *origin of the parents*. We follow a similar strategy to Kleineper, and de Valk (2016) and distinguish between the 2.0 generation, who are daughters of two foreign born parents, and the 2.5 generation, who are daughters of mixed couples: one immigrant and one non immigrant parent. From the 2.0 generation we are further able to distinguish between women of Turkish origin and others. Our final categories are

- (1) both parents native German,

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<sup>7</sup> The average silhouette width measures the coherence of the cluster solution, it considers the consistency of elements within clusters and also the distance between clusters.

- (2) one parent native German and one parent foreign,
- (3) two foreign parents: from Turkey,
- (4) two foreign parents: other.

In relation to parental origin, we are also interested in the socio economic conditions women grew up with, as a proxy for this we distinguish whether the father had or not any type of *professional qualification*.

Since children of migrant origin have often been found to be more highly represented in certain school tracks we also control for the *compulsory education* trajectories the women followed. Depending on the school trajectories women will have different opportunities in the labor market. Educational paths are for the most part chosen when children are roughly 10-12 years old. We distinguish between (1) Gymnasium (2) other school (including Hauptschule and Realschule) and (3) other: those that didn't obtain a degree nor followed one of the mentioned degree paths.

For daughters, the gender roles in their parent's household and specifically the employment behavior of their mother are known predictors for their own employment behavior. So we control for whether the mother was *employed when the woman was 15*.

Our final independent variable is the *family trajectory type*. These types correspond to the data driven clusters we found for family formation sequences. The optimal cluster solution distinguishes between 4 different types of *family trajectories* (in appendix A2. are more details on the clustering). The defined family formation types are

- (1) Early family formation: women who got married and had a child before age 27.
- (2) Postponed family trajectories: women who were not married and were childless at least until age 27.
- (3) Single mothers



(4) Others who had incomplete histories or had divorced – a very small group (4%)

As a further control, to account for the different institutional contexts in different historical periods, we categorize women by different *cohorts*. We consider women who were born between 1950 and 1972, they were born in the post-war period. It was the time before the labor recruitment stopped, and also a time before any special integration measures for migrants and their children existed (Heckmann and Schnapper 2016). They entered early adulthood before there was a real discussion about migration and integration in the 1990s. We further distinguish between women born between 1973 and 1979; a period when family reunification was high (Gonzales-Ferrer 2006). These women entered adulthood as the discussions about immigration began to increase, but most children of migrants were still born foreigners. Finally we consider women who were born between 1980 and 1987, these are women who started to see more favorable naturalization laws in their early adulthood.

## 5 Results

In this section we will now visualize the clusters by employment and family formation, and the sample statistics. Then we will discuss the results of the multinomial logistic regressions.

[Figures 1a and 1b around here]

### *Cluster solutions: Types of employment and family trajectories*

In Figure 1a we visualize the sequence index plots for the 4 cluster solution of employment trajectories, ASW= .33 (see Figure A1). Each line corresponds to one women's biography.

The largest cluster, and therefore most common trajectory, is a trajectory in which women enter sustained full time employment after education, some time before age 23. Around one half (47%) of the women in our sample follow this trajectory. The second most common trajectory is a part time employment trajectory (19%). It differs from the full time employment trajectory as around ages 25 and 26 most women have transitioned to part time positions. The third cluster (15% of the sample) are women who followed long education paths in comparison to the other clusters. Some start full time employment after 25, but in general it is a cluster with longer education spells. The fourth and final cluster named the 'non employment' cluster is 19% of the sample. It contains women who after age 25 go through various non-employment spells.

In Figure 1b, we can see the 4 clusters optimal solution (ASW=.5, Figure A2) of family formation trajectories. The first cluster is the early family formation cluster (45% of the sample). It consists of women who comparably followed an early family formation pattern. Most got married in the early twenties and this was followed by the birth of their first child. Some union dissolution are visible at the end of the observed pattern but they are minimal, as we are still looking only at women lives up to their late 20s. The second cluster is the family formation postponement cluster. It is a cluster with few family transitions in the late 20's. 709 follow this path, which corresponds, to 41% of the sample. The third and fourth clusters have very few cases so we will not discuss them.

#### *Parental origin and the relation to other characteristics*

[Table 1 around here]

In Table 1 we can find the distribution of the covariates of interest by parental origin. Starting with our dependent variable, the employment clusters, we can see that there are some raw differences in how women of different backgrounds are distributed into the clusters. Most native German women followed the common trajectory of full time employment after education (49%), while only 37% of women with Turkish origin. Women of Turkish origin also stand out as the ones to have the highest percentage of women following non-employment trajectories (31%). Half German women also differ to native German women in their cluster affiliation; they are more highly represented than other groups in the long education trajectories in contrast to all other groups. The ‘other foreign’ group does not seem to differ to native German women in the raw trajectory choices. Our hypothesis 1a and 1b are then only partially confirmed, differences in life course paths by ethnic origins exist, we cannot say, however, that it is purely attributable to the ‘migration background’, given that the distribution of the ‘other: foreign group’ is different.

The family formation trajectories mirror the employment trajectories in the sense that groups who follow trajectories of employment and education are less related to the early family formation group and conversely. Half German women who were also highly represented in the long education cluster are also highly represented in the postponed family formation cluster. Turkish women, who are more highly represented in the non-employment cluster, are in contrast, highly represented in the early family formation clusters.

With respect to cohort, there is a noticeable difference between the distribution of Turkish origin women and the other groups. Most of the Turkish origin women in our

sample were born after 1972. This makes sense because it was the period when a lot of Turkish families started to get established in Germany.

There are also differences by parental origin in the professional qualifications of the father. In comparison to other groups, fathers in couples of two foreigners tend to have a professional degree in a smaller proportion compared to fathers in German or bi-national partnerships. This is especially the case of Turkish origin fathers, of which 61% had no professional qualification.

Concerning the compulsory schooling trajectories we also see raw differences between the groups. In comparison to other groups, a large proportion (34%) of half German women followed a Gymnasium path. Turkish women are less likely to follow the Gymnasium path; they are more highly represented in the ‘other school’ education path. These differences are in line with previous literature that points to the educational disadvantages of the Turkish community (Hartmann 2016; Dustmann et al. 2011; Kristen and Granato 2007, Kalter 2006).

Finally the employment behavior of the mother when the women were 15 years old also differs by groups. It must be noted that a large percentage of the observations have no information, but amongst the ones whom do, those of Turkish origin stand out. 40% of their mothers were not employed when the women were 15 years old.

*Regression results: Ethnic differences*

[Table 2 around here]

Table 2 reports the results of the multinomial logistic regression used to test cluster affiliation. The dependent variables are the employment clusters. We used a stepwise strategy to identify associations between parental origin and different related factors. In Model 1 we include only cohort and parental origin and in Model 2 we include other control variables on compulsory schooling trajectories, and parental characteristics. Model 3 includes the family trajectories. Cluster 1, the most common path followed, which consists of a transition from education into full time in the early 20s, serves as the reference category in all models. The results are given in relative risk ratios, they are given in relation to the reference cluster and the reference categories selected for each covariate in the model.

The first variable listed in the model is Cohort, this is to control for compositional differences across time found above. There are ascending differences with the passage of time, meaning there is a diversification in the paths taken by the more recent cohorts. This result is robust across the models. The diversification in time is in line with previous findings on the de-standardization of the life course (Brückner and Mayer 2004).

The origin of the parents is a significant factor that plays out in young women following different life paths. Confirming the descriptive results of Table 1, half German women are more likely than native German women to follow the part time employment path or the long education path. These differences remain after controlling for other parental characteristics and the taken education paths. Turkish origin women are more likely than native German women to follow the long education and the non-employment paths. The likelihood of being on the long education path becomes especially significant when the socio economic disadvantages of the parents are controlled for. Robust differences exist in the paths taken between women of native German origin, half German

women and Turkish origin women. No significant differences seem to exist with the other foreign group.

In Model 2 (M2) once we account for the low proportion of professional degrees amongst Turkish fathers, the different school path taken and the lower proportion of working mothers for some origins, some differences between ethnic origins are explained while others are accentuated. A Gymnasium education path makes it more likely for women to end up in a part time mixed path in contrast to a straight full time path after education. A Gymnasium path is also an important predictor for taking the long education path. This is related to the length of the Gymnasium in comparison to other degrees, but it could also be because vocational paths are linked with a clear employment position or path along with the education. Since a higher proportion of half German women took the Gymnasium path, this slightly explains differences with native Germans. The father having a professional degree also increases the likelihood of women following the long education path. Due to the different proportion of native women following a Gymnasium path in comparison to half German women, and also because the fathers of half German women were on average more professionally qualified, the differences in odds ratios between half German and native German women are partially explained. In the case of women of Turkish origin, there is an inverse relation in the distribution of the covariates when contrasted with native German women. Once we control for factors of disadvantage, Turkish women show the highest odds of following the long education path. High socio economic status, or the proxy of the father having a professional qualification, increases the odds of a daughter following a long education path. So compositional differences in socio economic status explains some of the differences between half Germans and native Germans (*hypothesis 2a*). Following the non-employment path in contrast to taking the

common full employment path is related to not having a conventional degree or having a non-working mother at age 15. Since there is a higher percentage of Turkish women who did not finish or did not received a conventional educational degree, and whose mothers did not work, these factors partially explain why this group is more highly represented in the non employment cluster than native German women (*hypothesis 2b and 3a*).

Family formation behavior is strongly related to culture and is also transmitted through generations. In Model 3 (M3) we can see how family paths seem to be strong determinants of the taken employment paths. As we saw from the distributions above (Table 1), differences by parental origin exist in the proportion of women who take different family formation. As could be expected, in contrast to the conventional ‘full time path’, the ‘part time employment path’ and the ‘non-employment path’ are more strongly related to early family formation. The ‘long education path’ is in contrast more related to the postponement of family formation. Half German women are much more likely to show postponement behavior. Once we control for this compositional difference, half German are even more likely than native Germans to take a more unconventional ‘part time employment path’. Regarding the ‘long education path’, once we account for the family formation path differences, since half German women are more highly represented in the postponement path, differences in rrr between half German and native German women are explained. In the case of Turkish women, the differences for this cluster were rather emphasized. Since Turkish women were much more likely to be on the early family formation path in contrast to native women, once we control for this compositional difference, Turkish women show the highest odds of following the ‘long education path’. With respect to the ‘non-employment path’, since it is related to early family formation behavior and many Turkish women showed this behavior, the family cluster covariate

explains the rest of the parental origin differences between those who took the ‘non-employment path. So the fact that Turkish women are more likely to enter early family formation explains why they might be more highly represented amongst the non-employed women (hypothesis 3b).

To finalize, in Figures 2a and 2b we can more certainly confirm *hypothesis 3b* for the case of Turkish women. The figures show the predicted probabilities at means for models M1 and M3, by parental origin and cluster affiliation, before and after accounting for the other covariates. Here we can see more clearly, that for all origins the most common life course path is to enter full time employment after education. Native Germans and also women with two foreign parents other than Turkey show the highest point probabilities of ending up in this path even after controlling for the other covariates. Half German women show the highest probability of following the part time path and also the long education path. The choice of long education is then explained by the different socio economic conditions in the parental household. In the case of Turkish women, once we account for the other parental characteristics and the compulsory schooling path they followed, they show a higher probability than other origins of ending up in the long education path. Turkish women also show the highest probabilities of ending up in a ‘non-employment path’ (30%) this is later explained by the low employment of their mother and by the high incidence being in an early family formation path.

## **Discussion and Conclusions**

In this paper we have visualized the life course trajectories of women born in Germany between 1950 and 1987. Using sequence analysis we identified 4 *typical* education-



employment trajectories. Then we studied cluster affiliation and found some differences in the paths taken by native and children of migrant's women. Almost half of the sample followed a full-time employment trajectory after compulsory education; the other three clusters, of similar sizes, consisted of part time, long education and non-employment. In accordance the de-standardization of the life course we found an increase in the diversification of paths with the passage of time. Women from the most recent cohorts were more highly represented in alternative paths than the most common one of full time employment. Women children of migrants were less likely to be in the most common path than native women, but not all of them, differences were specifically pronounced for half German women and Turkish origin women. Apart from the full-time employment path, which regardless of the parental origin is the most common path, half German women tended to follow the part time path or the long education path with a higher probability. Turkish women tended to follow the non-employment path with a higher probability. Once we controlled for socio-economic background factors related to the different socialization experiences women had in the parental household, some of the differences between parental origins are explained.

From our analysis we cannot conclude that the differences in life course paths are fully attributable to women's migration background. There were no significant differences between the native German population and the perhaps too heterogeneous group of women who had two non-Turkish foreign parents. Women of half German origin went in a larger proportion through a Gymnasium education path, a large proportion of their fathers had professional qualifications, mothers were equally as employed as native German women and a large fraction also postponed family formation. These factors played into half German women not taking the conventional full time employment path as frequently as

native German women, but instead being more likely to take the part time or long education paths. Turkish origin women stand out as the group with the most different behavior and further observed characteristics. Most of the fathers in this group had no professional degree; women in this group were also less likely than other groups to have taken a Gymnasium track. One of the strongest differences was in the family formation behavior, 58% of the Turkish women started family early, while native German women followed with 47%. Socio economic disadvantages that are related to the origin of their parents explain some of these differences, but the culture they grew up with, the role model of their mother and perhaps the expectations in family formation are the main reasons why Turkish women are highly represented in the non-employment cluster. Findings are similar to other studies that have found Turkish cultural heritage has a large weight in the life paths and general transition timing of second generation women (Pailhé 2017, Kleineper and de Valk 2016, Scott and Stanfors 2011, Krapf and Wolf 2015). They also add to previous studies that have found Turkish minorities have been disadvantaged in their education and employment opportunities (Luthra 2010, Kalter 2006, Kristen and Granato 2007). Although studies have also found that education is one of the best mechanisms to eliminate inequalities, group specific penalties of marriage and childbirth are also some of the reasons this group fails to reach middle class positions (Hartmann 2016). Furthermore, experimental studies have shown ethnic discrimination in Germany exists and it is partially a result of culture differences, but especially related to socio-economic discrimination (Koopmans et al. 2018; Kaas, L., & Manger, C. 2011; Klink, A., & Wagner 1999).

To finalize we must recognize that there is still large room for further investigation on the different life course paths women of different ethnic origin follow in Germany. Our study also faces various limitations. Due to sample size we were not able to single out other

specific ethnic origins, apart from native German and Turkish, the other two groups are very heterogeneous to do a proper analysis on culture. We were not able to make a full analysis on the de-standardization of the life course, other aspects of the transition to adulthood like leaving parental home and other partnership stages such as cohabitation were not available in our data. To end, we must note that this is only an analysis on broad categories of labor market participation; part time employment can vary from marginal employment to almost full time, and non-employment does not account for the non-remunerated work women take on every day. There might also be important differences to identify in other dimensions such as income or the quality of the jobs.

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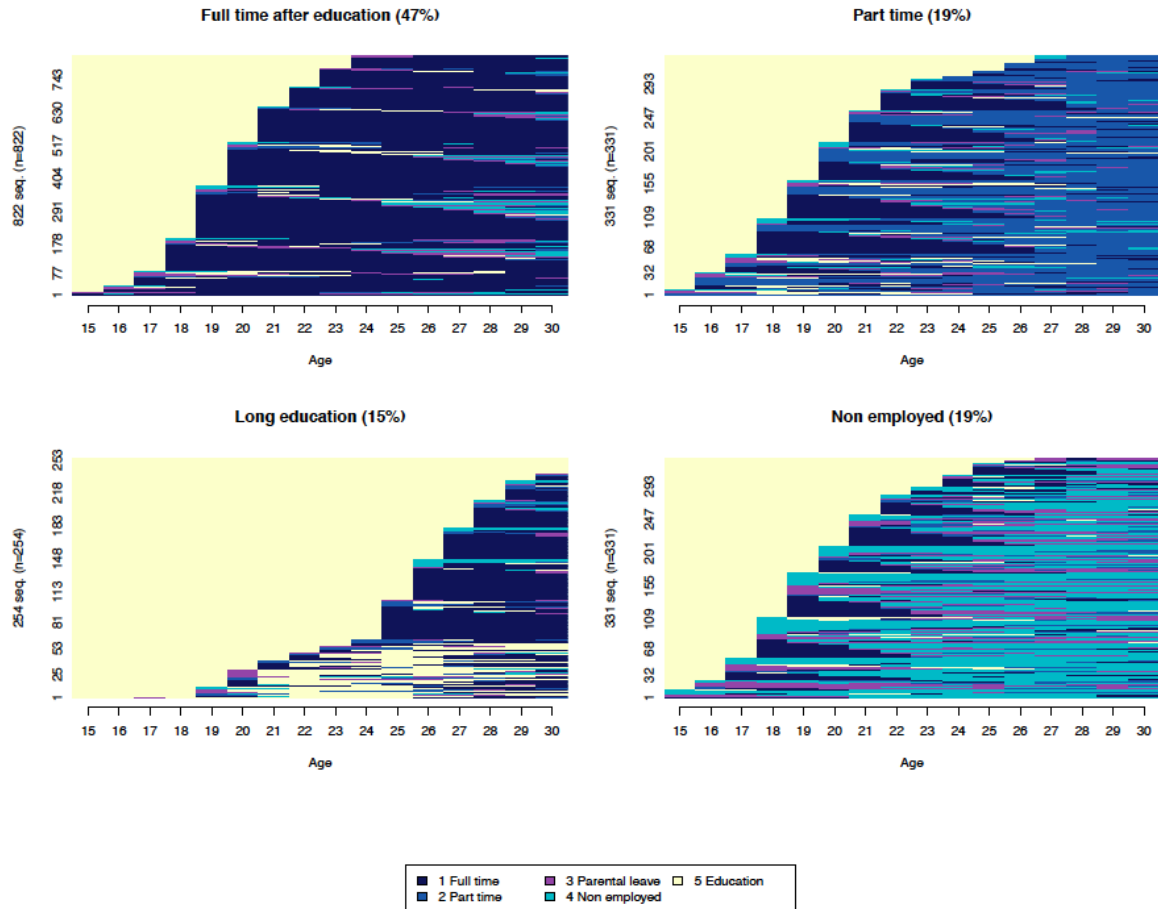
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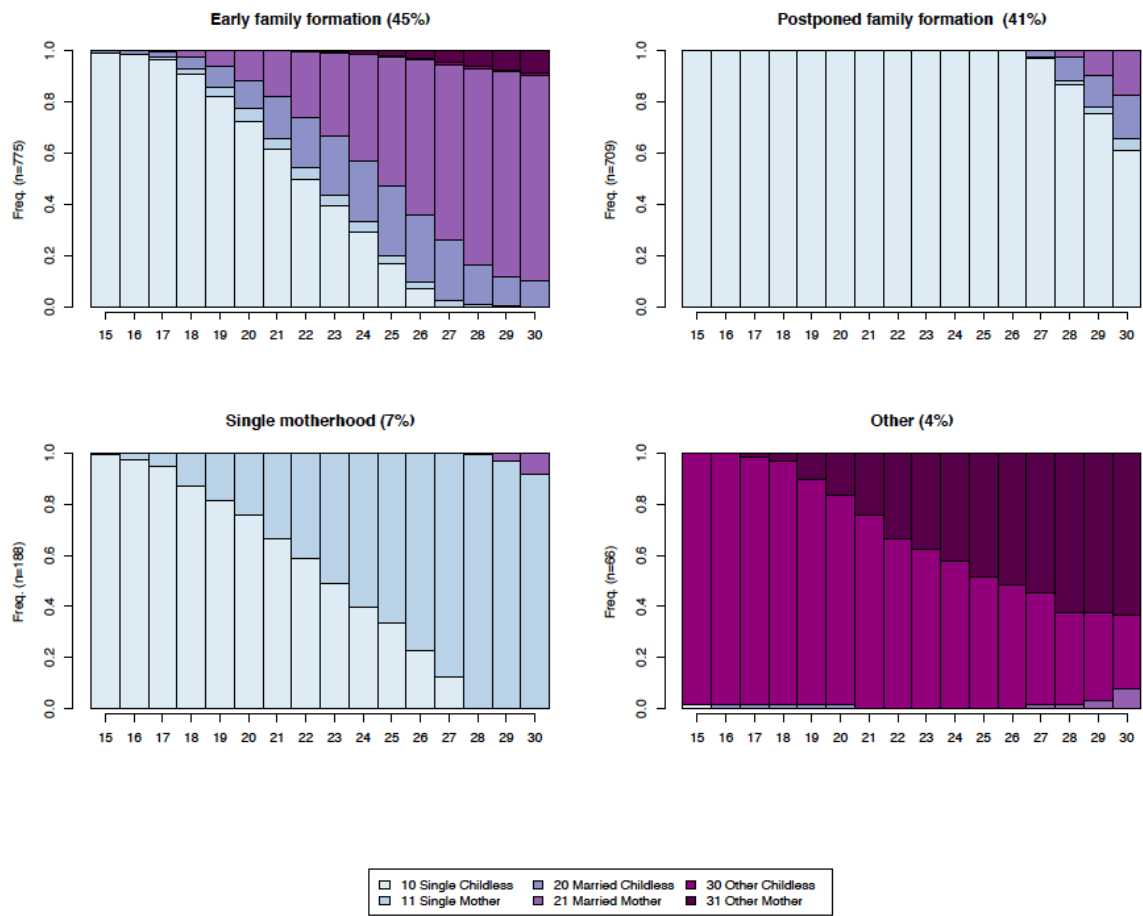
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## 7 Tables and Figures

**Figure 1a.** Sequence Index Plots: Education – Employment Trajectories (ASW=.33), Women born in Germany between 1950 and 1987.



**Figure 1b.** Sequence frequency plots on the 4 clusters of family formation (ASW=.5),



**Table 1.** Sample descriptive, women born in Germany between 1950-1987, frequency distributions of other variables by parental origin

	<b>German</b>	<b>half German</b>	<b>Turkish</b>	<b>other foreign</b>
Parents Country of Origin (N=)	869	302	139	428
<b>Employment Cluster (%)</b>				
Full time after education (47%)	49.1	41.7	37.4	50.7
Part time (19%)	19.0	22.5	16.6	17.5
Long education (15%)	13.2	19.9	15.1	13.6
Not employed (19%)	18.6	15.9	30.9	18.2
<b>Family Cluster (%)</b>				
Early family formation (45%)	47.0	35.4	57.6	42.1
Postponed family formation (41%)	39.8	49.3	22.3	42.8
Single motherhood (7%)	12.4	13.3	2.9	8.4
<b>Cohort (%)</b>				
1950-1972	36.6	40.1	10.8	42.5
1973-1979	37.1	36.1	51.8	32.9
1980-1987	26.4	23.8	37.4	24.5
<b>Father: professional degree (%)</b>				
None	5.6	12.3	61.2	29.7
Professional	83.8	77.2	37.4	54.7
missing	10.6	10.6	1.4	15.7
<b>Compulsory schooling (%)</b>				
Gymnasium	28.9	34.4	18.0	22.4
Other School	66.2	59.3	71.2	61.7
No degree	5.0	6.3	10.8	15.9
<b>Mother: Employment age 15 (%)</b>				
Not Employed	25.1	30.1	39.6	23.1
Employed	35.2	35.1	23.7	42.5
No info	39.7	34.8	36.7	34.4

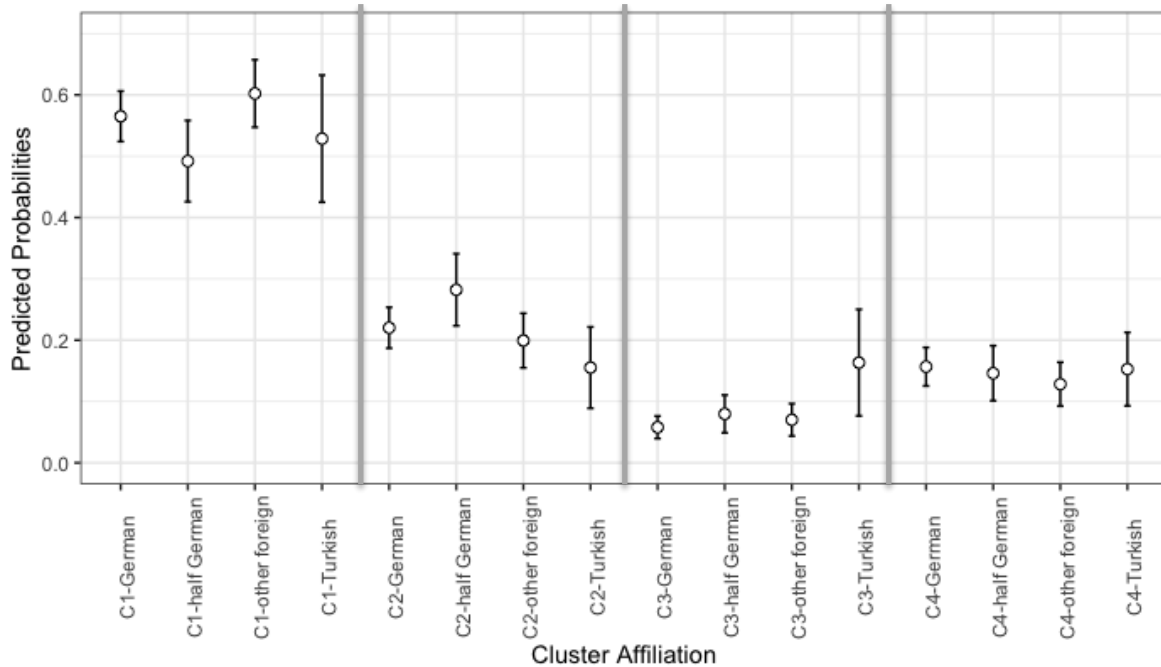
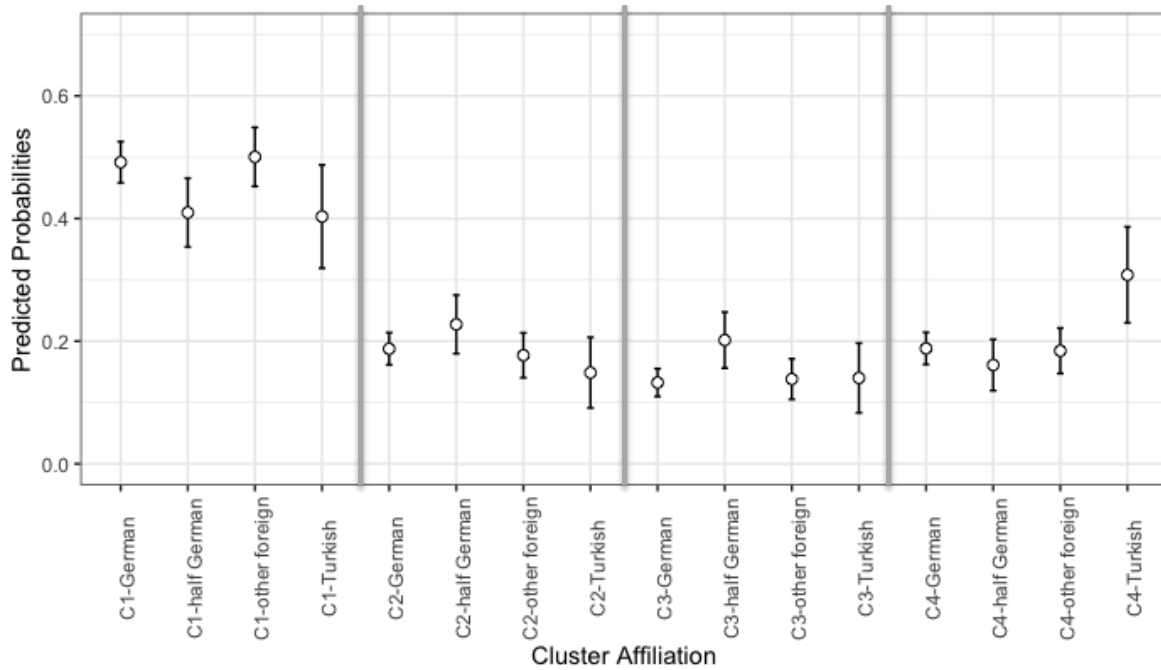
Source: own calculations, unweighted, GSOEP v34

**Table 2.** Multinomial logistic regression, cluster affiliation, relative risk ratios, 3 step wise models

Reference: Cluster 1 - Full time after education (RRR)	Cluster 2 - Part time			Cluster 3 -Long education			Cluster 4 - not employed		
	M1	M2	M3	M1	M2	M3	M1	M2	M3
<b>Cohort</b>									
1950-1972 (Ref-)	1	1	1	1	1	1	1	1	1
1973-1979	1.62***	1.58***	1.75***	1.63***	1.39*	1.28	1.13	1.15	1.41**
1980-1987	2.74***	2.68***	2.58***	2.22***	1.96***	1.99***	1.88***	1.90***	1.90***
<b>Parental origin</b>									
German (Ref-)	1	1	1	1	1	1	1	1	1
half German	1.46**	1.43**	1.57**	1.83***	1.77***	1.66**	1.03	1	1.17
Turkish	0.97	0.95	0.94	1.29	3.07***	4.13***	2.00***	1.65**	1.39
other foreign	0.93	0.89	0.99	1.03	1.32	1.32	0.96	0.83	0.91
<b>Father professional degree</b>									
No professional degree (Ref-)		1	1		1	1		1	1
Professional degree		0.91	0.98		1.68*	1.59		0.76	0.86
missing		0.97	1.04		1.58	1.4		1.26	1.42
<b>Mandatory schooling</b>									
Gymnasium (Ref-)		1	1		1	1		1	1
Other Sch..		0.70**	0.52***		0.04***	0.04***		1.14	0.74
No degree		1.06	0.89		0.24***	0.25***		2.19***	1.66*
<b>Mother employed age 15</b>									
Not employed (Ref-)		1	1		1	1		1	1
Employed		0.98	0.99		1.22	1.18		0.64**	0.66**
No info		1.13	0.98		0.84	0.98		1.02	0.82
<b>Family trajectory</b>									
Early family formation (45%)			1			1			1
Postponed family (41%)			0.30***			2.16***			0.08***
Single motherhood (7%)			1.96***			1.92			1.35
Constant	0.24***	0.33***	0.56*	0.18***	0.50*	0.29***	0.31***	0.36***	0.83

Note: legend: \* p<.1; \*\* p<.05; \*\*\* p<.01  
M1: Model 1, M2: Model 2, M3: Model 3

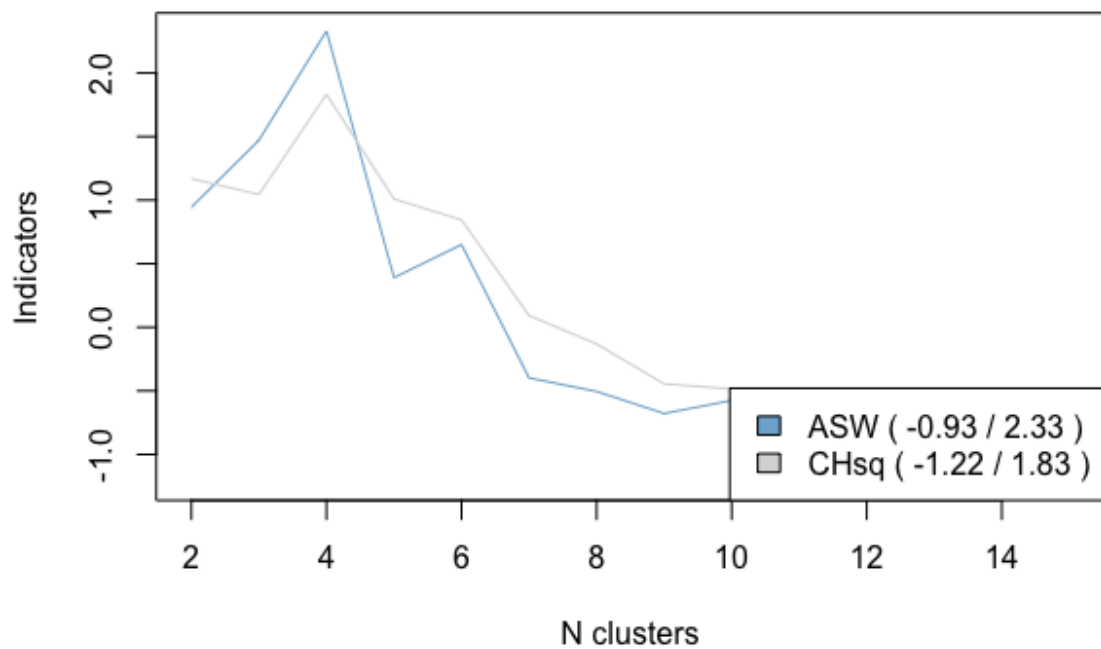
**Figures 2a and 2b.** Probability of cluster affiliation by parental origin, Model 1 (M1) – without controls- and Model 3 (M3) – with controls. Predicted probabilities at means, multinomial logistic model.



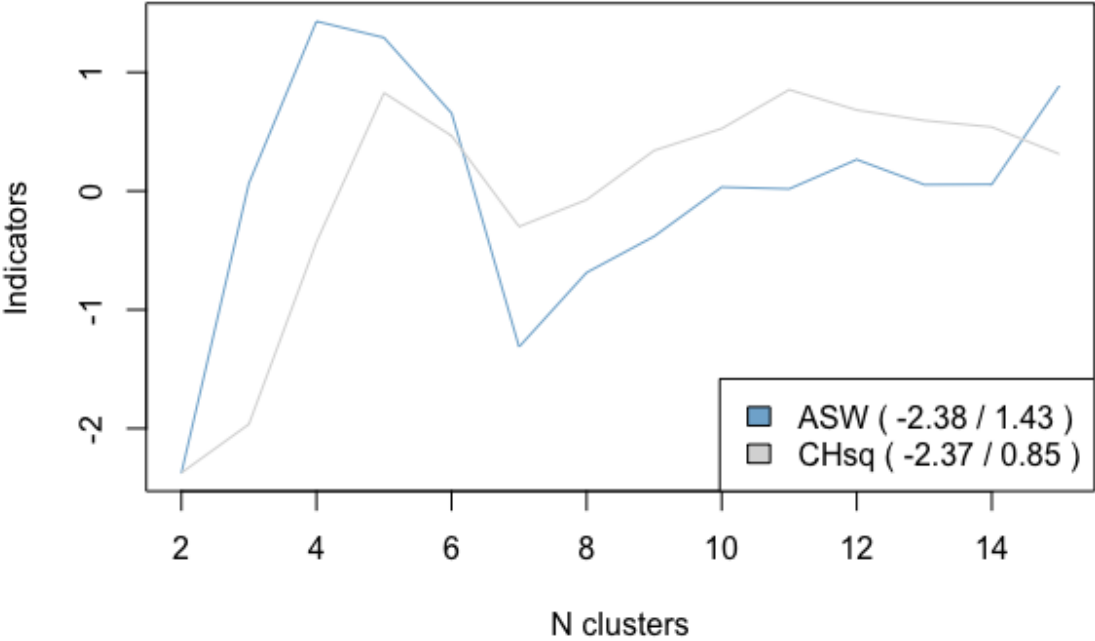
Note: C1: Full time; C2: Part time, mixed; C3: Long education; C4: Non employment  
 Model 3 controlling for: cohort, father: professional degree, compulsory schooling, employment of the mother at age 15.

**Appendix:**

**Figure A1.** Cluster choice employment (n=4, ASW=.33)

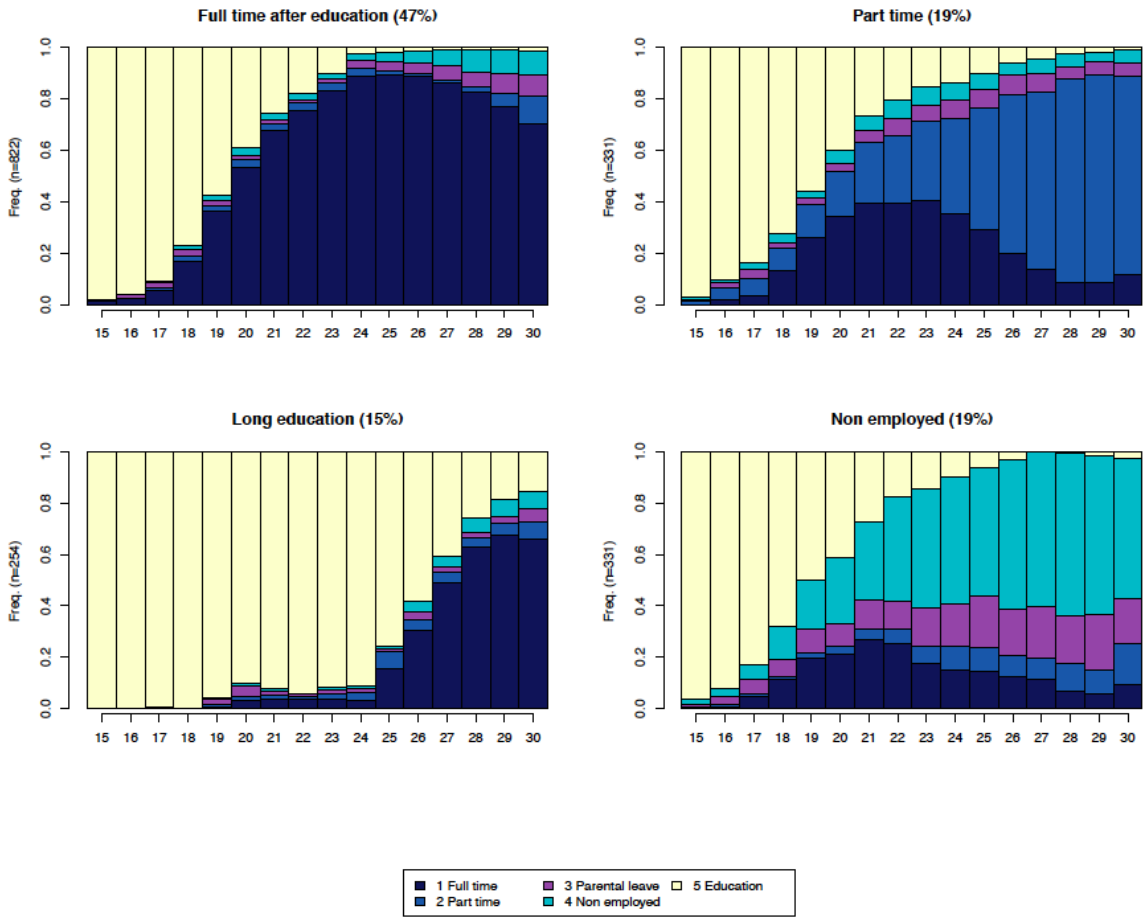


**Figure A2.** Cluster choice family formation (n=4, ASW=.5)

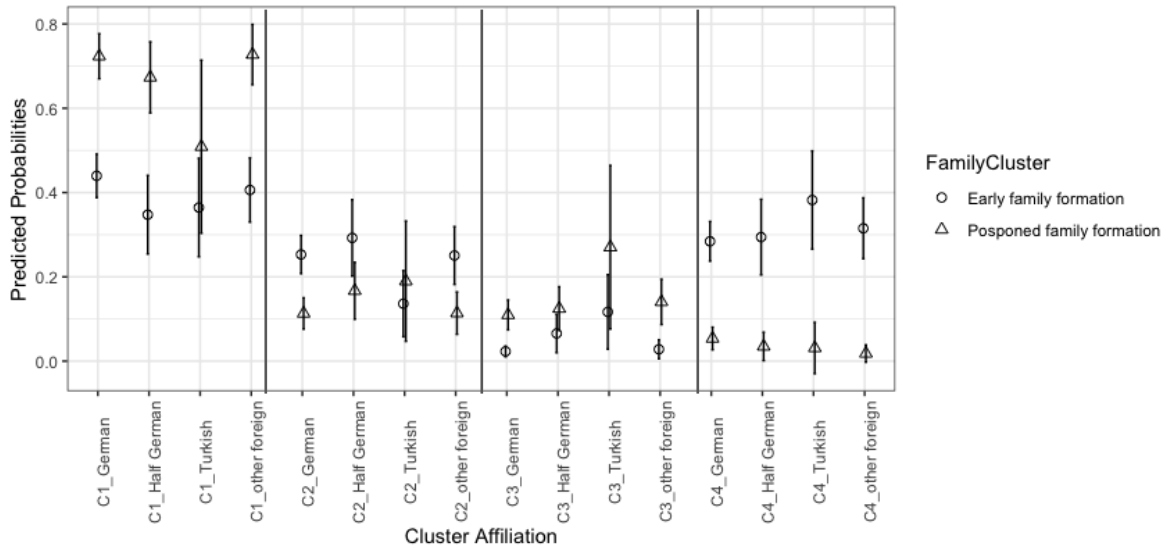


**Figure A3.** Frequency plots of the 4 employment clusters





**Figure A4.** Predicted probabilities, final model interaction family formation and parental origin.



Note: C1: Full time; C2: Part time, mixed; C3: Long education; C4: Non employment  
 Also controlling for: cohort, parental origin, mandatory schooling, mother: employment at age 15, father: professional degree

**Figure A5.** Employment and family formation paths by parental origin

